

CLAIMS

1. A monolithic ceramic electronic component comprising a first external electrode, a second external electrode, and a monolithic ceramic element including an internal electrode, the first and second external electrodes being disposed on both end faces of the monolithic ceramic element,

wherein the external electrodes each include corresponding sintered electrode layers which are disposed on the monolithic ceramic element and which contain oxides, intermediate electroplated layers each disposed on the corresponding sintered electrode layers, and plated layers each disposed on the corresponding intermediate electroplated layers; the oxides are present in surface portions of the sintered electrode layers; the oxides have exposed surface regions exposed from the sintered electrode layers; and the exposed surface regions have metals, disposed thereon, acting as seeds for forming the intermediate electroplated layers for covering the exposed surface regions.

2. The monolithic ceramic electronic component according to Claim 1, wherein the metals present between the exposed surface regions of the oxides and the intermediate electroplated layers have a hardness less than that of the oxides.

3. The monolithic ceramic electronic component according

to Claim 1 or 2, wherein the ionization tendency of the metals present between the exposed surface regions of the oxides and the intermediate electroplated layers is lower than that of a metal contained in the intermediate electroplated layers.

4. The monolithic ceramic electronic component according to Claim 1 or 2, wherein the intermediate electroplated layers are plated Ni layers.

5. The monolithic ceramic electronic component according to Claim 1 or 2, wherein the metals present between the exposed surface regions of the oxides and the intermediate electroplated layers are made of Sn or a Sn alloy.

6. A method for manufacturing monolithic ceramic electronic component including a first external electrode, a second external electrode, and a monolithic ceramic element including an internal electrode extending to an end face thereof, the first and second external electrodes being disposed on both end faces of the monolithic ceramic element, the method comprising:

a step of forming sintered electrode layers by attaching a conductive paste containing oxides to the monolithic ceramic element and then heat-treating the paste;

a step of depositing metals on exposed surface regions of the oxides that are exposed from surface portions of the sintered electrode layers, the metals acting as seeds for

forming intermediate electroplated layers for covering the exposed surface regions of the oxides;

a step of forming the intermediate electroplated layers over the sintered electrode layers and the metals disposed on the exposed surface regions of the oxides by electroplating; and

a step of forming plated layers on the outer faces of the intermediate electroplated layers.

7. The monolithic ceramic capacitor-manufacturing method according to Claim 6, wherein in the step of depositing the metals, which act as the seeds for forming the intermediate electroplated layers for covering the exposed surface regions of the oxides, on the exposed surface regions of the oxides which are exposed from the surface portions of the sintered electrode layers, the metals are deposited on the exposed surface regions of the oxides in such a manner that the metals are transferred from media covered with the metals to the exposed surface regions of the oxides.

8. The monolithic ceramic capacitor-manufacturing method according to Claim 7, wherein in the step of depositing the metals, which act as the seeds for forming the intermediate electroplated layers for covering the exposed surface regions of the oxides, on the exposed surface regions of the oxides which are exposed from the surface portions of the sintered electrode layers, the metals present on media are

deposited on the exposed surface regions of the oxides in such a manner that the media covered with the metals with a hardness less than that of the oxides and the monolithic ceramic capacitor including the sintered electrode layers are placed into a vessel and then mixed.

9. The monolithic ceramic capacitor-manufacturing method according to Claim 8, wherein in the step of depositing the metals, which act as the seeds for forming the intermediate electroplated layers for covering the exposed surface regions of the oxides, on the exposed surface regions of the oxides which are exposed from the surface portions of the sintered electrode layers, the metals are deposited on the exposed surface regions of the oxides in such a manner that media coated with a metal of which the ionization tendency is lower than that of a metal contained in the intermediate electroplated layers and the monolithic ceramic capacitor including the sintered electrode layers are placed into an electroplating system and the metal on the media is dissolved and then precipitated.

10. The monolithic ceramic capacitor-manufacturing method according to any one of Claims 6 to 9, wherein the intermediate electroplated layers are plated Ni layers.

11. The monolithic ceramic capacitor-manufacturing method according to any one of Claims 6 to 9, wherein the metals deposited on the exposed surface regions of the oxides are

- 39 -

made of Sn or a Sn alloy.